

Science at Vanguard School

Subject Policy

Intent:

At Vanguard School, our curriculum aims to support all students in accessing a full and rich Science curriculum, based on the national curriculum for Science, but modified appropriately to meet the needs and interests of students.

The curriculum develops students' understanding of scientific thinking and connections between different concepts. It builds their knowledge of scientific vocabulary and symbols, allowing them to better understand the world around them scientifically and equip them for being able to better communicate their understanding.

Science lessons nurture students' scientific interests. They encourage exploration of the world through scientific enquiry, applying observational, practical, modelling and problem-solving skills.

Science supports students' independence and confidence in everyday life. It enables students to become active and well-informed citizens in society. Studying Science at Vanguard School encourages students to analyse and evaluate claims and situations critically, both qualitatively and quantitatively. This includes being able to evaluate risks and critically evaluate the uses and implications of science in today's world and the future and communicate their thoughts effectively. This will help students develop their understanding of causes and effects both in scientific and non-scientific situations.

Implementation:

Science is 'hands-on'; it is taught as a fun, practical subject. At KS3, students follow the Exploring Science scheme of work, written by Pearson (Edexcel). This consists of a spiral curriculum which builds skills and knowledge sequentially.

Some of the key topics studied at KS3 are:

- Year 7
 - Cells
 - Acids and Alkalis
 - Energy
 - Separating Mixtures
 - Electricity
 - Sexual reproduction in animals
- Year 8
 - Food and Digestion
 - Combustion
 - Sound and Light
 - Breathing and Respiration
 - The Periodic Table
 - Ecosystems
- Year 9
 - Genetics and Evolution
 - Fluids
 - Unicellular Organisms
 - Forces
 - Plant reproduction

Literacy, numeracy and working scientifically skills are embedded within the topics. They will also have lessons emphasising science in the news and specifically relating the topics to everyday life.

At KS4, a range of Science qualifications, chosen carefully with individual students in mind, open the door to further study, apprenticeships and a fulfilling career. At Vanguard school we offer KS4 qualifications that include IGCSE single award, combined Science and Entry Level Certificate Science.

Impact:

Science qualifications open the door to further study, apprenticeships and a fulfilling future career. More generally, science has an important role to play in instilling a love of learning, both within school and in the long term.